Michael Hahsler

Department of Computer Science and Engineering
Lyle School of Engineering
Southern Methodist University
Dallas, TX 75205, USA

mhahsler@lyle.smu.edu
http://lyle.smu.edu/~mhahsler/

Experience

Visiting Assistant Professor and co-director of the Intelligent Data Analysis Lab (IDA@SMU), Department of Computer Science and Engineering, Lyle School of Engineering, Southern Methodist University (SMU), Dallas, TX, USA, 01/2009-present.

E-Business and Marketing Research Adviser, Hall Financial Group, Frisco, TX, USA, 2007-2008.

Associate Professor (Privatdozent), Department of Information Systems and Operations and core researcher, Research Institute for Computational Methods, Vienna University of Economics and Business Administration (WU), Austria, 2006-2007.

Adjunct Professor, Department of Computer Science, Webster University, Vienna Campus, Austria, 2002-2003.

Assistant Professor (Universitätsassistent), Department of Information Systems and Operations, WU, Austria, 2001-2006.

Research Assistant and Lecturer (Universitätsassistent), Department of Applied Computer Science, WU, Austria, 1998-2001.

Education

Habilitation (postdoctoral university degree with lecture qualification) in Business Informatics, Vienna University of Economics and Business Administration (WU), Austria, 2006.

Ph.D. with distinction (Business Informatics), WU, Austria, 2001. WU is ranked 28 in the 2011 Financial Times European Business School Ranking.

M.S. (Business Administration; majors: Information Systems and Applied Computer Science), WU, Austria, 1998.

Associate degree with distinction (Communication Engineering), College of Technology - HTBLA Wien I, Vienna, Austria, 1992.

Research Interests

Data Mining/Machine Learning/Business Intelligence: Data stream mining, recommender systems, data visualization, association rule mining.

Software Engineering: Code reuse, design patterns, open source software development processes.

Information Systems: Digital information management, digital libraries.

E-Marketing: Market basket analysis, pricing of information goods.

Awards

Graduate Student Council Outstanding Faculty Award, Computer Science and Engineering, Bobby B. Lyle School of Engineering, Southern Methodist University, 2011.

Top publication 2007 award for "Data Mining and Marketing: Exploratory Market Basket Analysis" (in German: "Data Mining und Marketing am Beispiel der explorativen Warenkorbanalyse") in Marketing ZFP, WU, 2007.

Finalist of the Global Bangemann Award 1999 (Stockholm Challenge) with the Virtual University Project, Stockholm, Sweden, 1999.

Winner of the 1997 WU Innovation Award, WU, 1997.

Project Experience

Lead developer of the extension packages

arules - infrastructure for analyzing transaction data with association rules,
TSP - infrastructure for the traveling salesperson problem,
seriation - seriation/sequencing techniques and
rEMM - temporal modeling for massive data stream clustering

for R, a free software environment for statistical computing and graphics.

Head of engineering, ePub-WU project. Development of an open access digital library for working papers and Ph.D. theses, WU, 2001-2003.

Project Manager, Virtual University Project, WU, 2001-2004.

Designer and Assistant Project Manager, Virtual University Project, WU, 1997-2001.

Professional Memberships

ACM, ACM SIGKDD, GfKl (German Classification Society), IEEE Computer Society

Languages

English, German (first language)

Citizenship and Residency

Austria, United States permanent resident

Teaching Experience

Undergraduate level

"CSE 1342: Programming Concepts," Lyle School of Engineering, SMU, Spring 2010, Spring 2011, Fall 2011.

"CSE 1341: Principles of Computer Science," Lyle School of Engineering, SMU, Fall 2009, Fall 2010.

"Introduction to Information Management" (in German "Grundlagen der Informationswirtschaft"), WU, Fall 2008, Spring 2009.

"Introduction to Programming with Java" (in German "Grundzüge der Programmierung mit Java"), WU, Spring 2002, Fall 2002, Spring 2003, Fall 2003, Spring 2004, Fall 2004, Spring 2005, Fall 2005, Spring 2006, Fall 2006, Spring 2007.

"Information Management for Businesses" (in German "Informationsmanagement in Organisationen I / Informationswirtschaft 2"), WU, Spring 2003, Spring 2004, Spring 2005, Fall 2005, Spring 2006, Fall 2006, Spring 2007.

"Programming Lab (Java, C++, Perl, Databases)" (in German "Rechnerpraktikum aus Programmierung"), WU, Spring 2001, Fall 2001, Fall 2002, Fall 2003, Fall 2004, Fall 2005, Fall 2006.

"IT Internship with Thesis" (in German "IT-Praktikum mit Bakkalaureatsarbeit,"), WU, Spring 2005, Spring 2006, Spring 2007, Fall 2008, Spring 2009.

"COAP 2120: Data Handling on the Web," Webster University (Vienna Campus), Spring II 2002.

"COAP 3110: Interactive Web Site Development," Webster University (Vienna Campus), Fall II 2002.

"Introduction to Electronic Data Processing" (in German "Elektronische Datenverarbeitung: Markup-Konzepte"), WU, Fall 1998.

Graduate level

"CSE 7337: Information Retrieval and Web Search," Lyle School of Engineering, SMU. Spring 2012.

"CSE 8331: Advanced Topics in Data Mining," Lyle School of Engineering, SMU. Spring 2012.

"CSE 8091: Advanced Scientific Computing with R," Lyle School of Engineering, SMU, Fall 2011.

"CSE 8098: Computer Science Seminar," Lyle School of Engineering, SMU, Fall 2009, Spring 2010, Fall 2010, Spring 2011, Fall 2011, Spring 2012.

"Process Oriented Information Management" (in German "Prozessorientierte Informationswirtschaft"), WU, Fall 2006, Spring 2007.

"Current Topics in Information Management" (in German "Seminar aus Informationswirtschaft"), WU, Spring 2000, Fall 2000, Fall 2001, Spring 2002 Fall 2002, Spring 2003, Spring 2004, Spring 2005, Spring 2006, Spring 2007.

"Introduction to Object Oriented Programming" (in German "Einführung in das objektorientierte Programmieren"), WU, Spring 1999, Fall 1999, Spring 2000, Fall 2000, Spring 2001.

Executive programs and professional training

"CSE 7343: Operating Systems and System Software," Executive Master's Program in Security Engineering, Lyle School of Engineering, SMU, Spring 2009.

"UML Basics: Introduction to Object Oriented Modeling" (in German "UML-Basics: Einführung in Objekt-Orientierte Modellierung mit der Unified Modeling Language"), ADV (Arbeitsgemeinschaft für Datenverarbeitung), Vienna, 2000 to 2001.

"Introduction to Object Oriented Programming with C++" (in German "Einführung in den Einsatz von Objekt-Orientierung mit C++"), ADV (Arbeitsgemeinschaft für Datenverarbeitung), Vienna, 2000.

University and Department Service

Chair of the Department's Undergraduate Program Committee, CSE, SMU, 2010-

Department Colloquium Coordinator, CSE, SMU, 2009-

Member of the Department's Teaching Assistant Selection Committee and Teaching Assistant Coordinator, CSE, SMU, 2009-

Member of the PhD Committees for Mallik Kotamarti (SMU, 2010), Charlie Isaksson (SMU, 2009-), Yu Su, (SMU 2011) and Maya El Dayeh (SMU 2011-)

Committee to implement a new Business Informatics Degree Program, WU, 2004-2006

Member of the Habilitation Committee for Christopher Casey, WU, 2004

Department Research Evaluation Coordinator, WU, 2002

Undergraduate EDP Exam Coordinator, WU, 1999-2002

Current Graduate Students

Maya El Dayeh: Protein pathway completion (working title, PhD), SMU, 2012 (expected)

Akshaya Aradhya: recommenderlab - A framework for evaluating and improving recommender systems (working title, MS), SMU, 2012 (expected)

Xiaodian Xie: Data Stream clustering for financial applications (working title, MS), SMU, 2013 (expected)

Andy Nagar: Rapid classification and differentiation of short genetic sequences (working title, PhD), SMU, 2013 (expected)

Sudheer Chelluboina: Data mining in transportation security (working title, PhD), SMU, 2013 (expected)

Hadil Shaiba: Advances in hurricane intensity prediction (working title, PhD), SMU, 2014 (expected)

Graduates

Christoph Breidert: Estimation of Willingness-to-Pay: Theory, Measurement and Application (Doctoral Thesis), WU, 2005.

Scientific Community Service

Editorial Board

International Journal of Open Source Software and Processes (IJOSSP), *Editorial Review Board Member* (2008-).

Organization

PAKDD 2012 - The 16th Pacific-Asia Conference on Knowledge Discovery and Data Mining, *Program Committee*, May 2012.

KDD 2011 - 17th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, *Program Committee,* August 2011.

QIMIE'11 - Quality Issues, Measures of Interestingness and Evaluation of Data Mining Models, workshop organized in association with the PAKDD'11 conference, *Program Committee*, May 2011.

StreamKDD'10 - Novel Data Stream Pattern Mining Techniques, workshop held in conjunction with the 16th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD-2010), *Organizer*, July 2010.

QIMIE'09 - Quality Issues, Measures of Interestingness and Evaluation of Data Mining Models, workshop organized in association with the PAKDD'09 conference, *Program Committee*, April 2009.

WebKDD 2008 - Knowledge Discovery on the Web, held in conjunction with the 14th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD-2008), *Program Committee*, August 2008.

31th Annual Conference of the German Classification Society (GfKl), *Session Organizer,* "Tools for Intelligent Data Analysis," March 2007.

30th Annual Conference of the German Classification Society (GfKl), S*ession Organizer*, "Tools for Intelligent Data Analysis," March 2006.

WebKDD 2006 - Workshop on Web Mining and Web Usage Analysis, held in conjunction with the 12th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD-2006), *Program Committee*, August 2006.

Reviewer for International Journals

Computational Statistics & Data Analysis
Data & Knowledge Engineering (DKE)
Electronic Commerce Research
IEEE Transactions on Knowledge and Data Engineering (TKDE)
IEEE Transactions on Systems, Man and Cybernetics (SMC)
Journal of Computer Science and Technology (JCST)
Journal of Machine Learning Research (JMLR)
Journal of Modelling in Management (JM2)
Journal of Retailing and Consumer Service
Knowledge and Information Systems: An International Journal (KAIS)
Management Science
Psychometrica
SIGKDD Explorations

Reviewer for International Conferences

ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)
Annual Conference of the German Classification Society (GfKl)
Americas Conference on Information Systems (AMCIS)
Hawaii International Conference on System Sciences (HICSS)
IEEE International Conference on Data Mining (ICDM)
International Conference on Wirtschaftsinformatik (WI)
International Conference on Information System Technology and Applications (ISTA)

Research Funding

Position Sensitive P-Mer Frequency Clustering with Applications to Classification, Co-PI, NIH R21HG005912, National Human Genome Research Institute, National Institutes of Health. $385,000, 2011-2013.

Mobile Communication Innovation Lab at SMU, Co-PI, Samsung, $25,000 (equipment), 2011-2012.

III/EAGER: Temporal Relationships Among Clusters in Data Streams (TRACDS), Co-PI, NSF-IIS 0948893, National Science Foundation, Division of Information & Intelligent Systems. $180,000 + 32,000 REU supplements, 2009-2012.

An Experimentation Environment for Generating Top-N Recommendations from Binary Data, PI, NSF I/UCRC: Net-Centric Software & Systems Consortium, $60,000, 2009.

Infrastructure for interdisciplinary research focusing on machine learning and simulation, Co-PI, Austrian Federal Ministry of Science and Education, €179,000 ($230,000), 2005-2008.

Digital Library – WU online publications, PI, University Library of the Vienna University of Economics and Business. €31,000 ($40,000), 2001-2009.

Supplementary funds for the virtual university project, PI, Vienna Chamber of Commerce, €11,000 ($14,000), 2001.

Publications

Articles in journals

1. Michael Hahsler, Sudheer Chelluboina, Kurt Hornik, and Christian Buchta. The arules R-package ecosystem: Analyzing interesting patterns from large transaction datasets. *Journal of Machine Learning Research*, 12:1977-1981, 2011.
2. Michael Hahsler and Kurt Hornik. Dissimilarity Plots: A Visual Exploration Tool for Partitional Clustering. *Journal of Computational and Graphical Statistics*, 20(2):335-354, 2011.
3. Rao M. Kotamarti, Michael Hahsler, Douglas Raiford, Monnie McGee, and Margaret H. Dunham. Analyzing Taxonomic Classification Using Extensible Markov Models. *Bioinformatics*, 26(18):2235-2241, 2010.
4. Margaret H. Dunham, Michael Hahsler, and Myra Spiliopoulou. Novel data stream pattern mining, Report on the StreamKDD'10 workshop. *SIGKDD Explorations*, 12(2):54-55, 2010.
5. Michael Hahsler and Margaret H. Dunham. rEMM: Extensible Markov Model for data stream clustering in R. *Journal of Statistical Software*, 35(5):1-31, 2010.
6. Michael Hahsler, Christian Buchta, and Kurt Hornik. Selective association rule generation. *Computational Statistics*, 12(2):303-315, April 2008.
7. Michael Hahsler, Kurt Hornik, and Christian Buchta. Getting things in order: An introduction to the R package seriation. *Journal of Statistical Software*, 25(3):1-34, March 2008.
8. Michael Hahsler and Kurt Hornik. TSP - Infrastructure for the traveling salesperson problem. *Journal of Statistical Software*, 23(2):1-21, December 2007.
9. Michael Hahsler and Kurt Hornik. New probabilistic interest measures for association rules. *Intelligent Data Analysis*, 11(5):437-455, 2007.
10. Thomas Reutterer, Michael Hahsler, and Kurt Hornik. Data Mining und Marketing am Beispiel der explorativen Warenkorbanalyse. *Marketing ZFP*, 29(3):165-181, 2007.
11. Michael Hahsler. A model-based frequency constraint for mining associations from transaction data. *Data Mining and Knowledge Discovery*, 13(2):137-166, September 2006.
12. Christoph Breidert, Michael Hahsler, and Thomas Reutterer. A review of methods for measuring willingness-to-pay. *Innovative Marketing*, 2(4):8-32, 2006.
13. Michael Hahsler, Bettina Grün, and Kurt Hornik. arules - A computational environment for mining association rules and frequent item sets. *Journal of Statistical Software*, 14(15):1-25, October 2005.
14. Michael Hahsler. Integrating digital document acquisition into a university library: A case study of social and organizational challenges. *Journal of Digital Information Management*, 1(4):162-171, December 2003.
15. Wolfgang Gaul, Andreas Geyer-Schulz, Michael Hahsler, and Lars Schmidt-Thieme. eMarketing mittels Recommendersystemen. *Marketing ZFP*, 24:47-55, 2002.

16. Andreas Geyer-Schulz, Michael Hahsler, and Maximillian Jahn. Educational and scientific recommender systems: Designing the information channels of the virtual university. *International Journal of Engineering Education*, 17(2):153-163, 2001.
17. Andreas Geyer-Schulz, Michael Hahsler, and Georg Schneider. The virtual university and its embedded agents. *ÖGAI Journal*, 18(1):14-19, 1999.
18. Peter Bruhn, Andreas Geyer-Schulz, Michael Hahsler, and Markus Mottel. Genetic machine learning and intelligent internet agents. *ÖGAI Journal*, 17(1):18-25, 1998.

Book chapters

1. Michael Hahsler, Kurt Hornik, and Thomas Reutterer. Warenkorbanalyse mit Hilfe der Statistik-Software R. In Peter Schnedlitz, Renate Buber, Thomas Reutterer, Arnold Schuh, and Christoph Teller, editors, *Innovationen in Marketing*, pages 144-163. Linde-Verlag, 2006.
2. Michael Hahsler. A quantitative study of the adoption of design patterns by open source software developers. In S. Koch, editor, *Free/Open Source Software Development*, pages 103-123. Idea Group Publishing, 2005.
3. Andreas Geyer-Schulz, Michael Hahsler, Andreas Neumann, and Anke Thede. Behavior-based recommender systems as value-added services for scientific libraries. In Hamparsum Bozdogan, editor, *Statistical Data Mining & Knowledge Discovery*, pages 433-454. Chapman & Hall / CRC, July 2003.
4. Andreas Geyer-Schulz and Michael Hahsler. Comparing two recommender algorithms with the help of recommendations by peers. In O.R. Zaiane, J. Srivastava, M. Spiliopoulou, and B. Masand, editors, *WEBKDD 2002 - Mining Web Data for Discovering Usage Patterns and Profiles 4th International Workshop, Edmonton, Canada, July 2002, Revised Papers*, Lecture Notes in Computer Science LNAI 2703, pages 137-158. Springer-Verlag, 2003.
5. Andreas Geyer-Schulz, Michael Hahsler, and Maximillian Jahn. A customer purchase incidence model applied to recommender systems. In R. Kohavi, B.M. Masand, M. Spiliopoulou, and J. Srivastava, editors, *WEBKDD 2001 - Mining Log Data Across All Customer Touch Points, Third International Workshop, San Francisco, CA, USA, August 26, 2001, Revised Papers*, Lecture Notes in Computer Science LNAI 2356, pages 25-47. Springer-Verlag, July 2002.
6. Andreas Geyer-Schulz, Michael Hahsler, and Maximillian Jahn. myvu: A next generation recommender system based on observed consumer behavior and interactive evolutionary algorithms. In Wolfgang Gaul, Otto Opitz, and Martin Schader, editors, *Data Analysis: Scientific Modeling and Practical Applications*, Studies in Classification, Data Analysis, and Knowledge Organization, pages 447-457. Springer Verlag, Heidelberg, Germany, 2000.

Edited books/proceedings

1. Margaret H. Dunham, Michael Hahsler, and Myra Spiliopoulou, editors. *Proceedings of the First International Workshop on Novel Data Stream Pattern Mining Techniques (StreamKDD'10)*. ACM Press, New York, NY, USA, 2010.

Conference proceedings

1. Maya Eldayeh and Michael Hahsler. Analyzing incomplete biological pathways using network motifs. In *27th Symposium On Applied Computing (SAC 2012)*. ACM, 2012
2. Vladimir Jovanovic, Margaret H. Dunham, Michael Hahsler, and Yu Su. Evaluating hurricane intensity prediction techniques in real time. In *Third IEEE ICDM Workshop on Knowledge Discovery from Climate Data, Proceedings of the of the 2011 IEEE International Conference on Data Mining Workshops (ICDMW 2011)*. IEEE, 2011.
3. Michael Hahsler and Sudheer Chelluboina. Visualizing association rules in hierarchical groups. In *42nd Symposium on the Interface: Statistical, Machine Learning, and Visualization Algorithms (Interface 2011)*. The Interface Foundation of North America, 2011.
4. Michael Hahsler and Margaret H. Dunham. Temporal structure learning for clustering massive data streams in real-time. In *SIAM Conference on Data Mining (SDM11)*. SIAM, 2011.
5. Yu Su, Sudheer Chelluboina, Michael Hahsler, and Margaret H. Dunham. A new data mining model for hurricane intensity prediction. In *Second IEEE ICDM Workshop on Knowledge Discovery from Climate Data: Prediction, Extremes and Impacts, Proceedings of the of the 2010 IEEE International Conference on Data Mining Workshops (ICDMW 2010)*. IEEE, 2010.
6. Rao M Kotamarti, Michael Hahsler, Douglas W Raiford, and Margaret H Dunham. Sequence transformation to a complex signature form for consistent phylogetic tree using extensible markov model. In *Proceedings of the 2010 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology (IEEE CIBCB 2010)*. IEEE, 2010.
7. Christoph Breidert and Michael Hahsler. Adaptive conjoint analysis for pricing music downloads. In R. Decker and H.-J. Lenz, editors, *Advances in Data Analysis, Proceedings of the 30th Annual Conference of the Gesellschaft für Klassifikation e.V., Freie Universität Berlin, March 8-10, 2006*, Studies in Classification, Data Analysis, and Knowledge Organization, pages 409-416. Springer-Verlag, 2007.
8. Michael Hahsler and Kurt Hornik. Building on the arules infrastructure for analyzing transaction data with R. In R. Decker and H.-J. Lenz, editors, *Advances in Data Analysis, Proceedings of the 30th Annual Conference of the Gesellschaft für Klassifikation e.V., Freie Universität Berlin, March 8-10, 2006*, Studies in Classification, Data Analysis, and Knowledge Organization, pages 449-456. Springer-Verlag, 2007.
9. Michael Hahsler, Kurt Hornik, and Thomas Reutterer. Implications of probabilistic data modeling for mining association rules. In M. Spiliopoulou, R. Kruse, C. Borgelt, A. Nürnberger, and W. Gaul, editors, *From Data and Information Analysis to Knowledge Engineering, Proceedings of the 29th Annual Conference of the Gesellschaft für Klassifikation e.V., University of Magdeburg, March 9-11, 2005*, Studies in Classification, Data Analysis, and Knowledge Organization, pages 598-605. Springer-Verlag, 2006.
10. Christoph Breidert, Michael Hahsler, and Lars Schmidt-Thieme. Reservation price estimation by adaptive conjoint analysis. In Claus Weihs and Wolfgang Gaul, editors, *Classification - the Ubiquitous Challenge, Proceedings of the 28th Annual Conference of the Gesellschaft für Klassifikation e.V., University of Dortmund, March 9-11, 2004*, Studies

in Classification, Data Analysis, and Knowledge Organization, pages 577-584. Springer-Verlag, 2005.

11. Georg Fessler, Michael Hahsler, and Michaela Putz. ePubWU - Erfahrungen mit einer Volltext an der Wirtschaftsuniversität Wien. In Christian Enichlmayr, editor, *Bibliotheken - Fundament der Bildung, 28. Österreichischer Bibliothekartag 2004*, Schriftenreihe der OÖ. Landesbibliothek, pages 190-193, 2005.
12. Michael Hahsler. Optimizing web sites for customer retention. In Bing Liu, Myra Spiliopoulou, Jaideep Srivastava, and Alex Tuzhilin, editors, *Proceedings of the 2005 International Workshop on Customer Relationship Management: Data Mining Meets Marketing, November 18-19, 2005, New York City, USA*, 2005.
13. Michael Hahsler and Stefan Koch. Discussion of a large-scale open source data collection methodology. In *38th Annual Hawaii International Conference on System Sciences (HICSS'05), January 3-6, 2005 Hilton Waikoloa Village, Big Island, Hawaii*. IEEE Computer Society Press, 2005.
14. Michael Hahsler and Stefan Koch. Cooperation and disruptive behaviour - learning from a multi-player internet gaming community. In Piet Kommers, Pedro Isaias, and Miguel Baptista Nunes, editors, *IADIS International Conference Web Based Communities 2004, Lisbon, Portugal, 24-26 March 2004*, pages 35-42. International Association for Development of the Information Society (IADIS), 2004.
15. Andreas Geyer-Schulz, Michael Hahsler, Andreas Neumann, and Anke Thede. An integration strategy for distributed recommender services in legacy library systems. In M. Schader, W. Gaul, and M. Vichi, editors, *Between Data Science and Applied Data Analysis, Proceedings of the 26th Annual Conference of the Gesellschaft für Klassifikation e.V., University of Mannheim, July 22-24, 2002*, Studies in Classification, Data Analysis, and Knowledge Organization, pages 412-420. Springer-Verlag, July 2003.
16. Andreas Geyer-Schulz, Michael Hahsler, and Anke Thede. Comparing association-rules and repeat-buying based recommender systems in a B2B environment. In M. Schader, W. Gaul, and M. Vichi, editors, *Between Data Science and Applied Data Analysis, Proceedings of the 26th Annual Conference of the Gesellschaft für Klassifikation e.V., University of Mannheim, July 22-24, 2002*, Studies in Classification, Data Analysis, and Knowledge Organization, pages 421-429. Springer-Verlag, July 2003.
17. Edward Bernroider, Michael Hahsler, Stefan Koch, and Volker Stix. Data Envelopment Analysis zur Unterstützung der Auswahl und Einführung von ERP-Systemen. In Andreas Geyer-Schulz and Alfred Taudes, editors, *Informationswirtschaft: Ein Sektor mit Zukunft, Symposium 4.-5. September 2003, Wien, Österreich*, Lecture Notes in Informatics (LNI) P-33, pages 11-26. Gesellschaft für Informatik, 2003.
18. Andreas Geyer-Schulz, Michael Hahsler, Andreas Neumann, and Anke Thede. Recommenderdienste für wissenschaftliche Bibliotheken und Bibliotheksverbünde. In Andreas Geyer-Schulz and Alfred Taudes, editors, *Informationswirtschaft: Ein Sektor mit Zukunft, Symposium 4.-5. September 2003, Wien, Österreich*, Lecture Notes in Informatics (LNI) P-33, pages 43-58. Gesellschaft für Informatik, 2003.

19. Andreas Geyer-Schulz and Michael Hahsler. Software reuse with analysis patterns. In *Proceedings of the 8th AMCIS*, pages 1156-1165, Dallas, TX, August 2002. Association for Information Systems.
20. Andreas Geyer-Schulz and Michael Hahsler. Evaluation of recommender algorithms for an internet information broker based on simple association rules and on the repeat-buying theory. In Brij Masand, Myra Spiliopoulou, Jaideep Srivastava, and Osmar R. Zaiane, editors, *Fourth WEBKDD Workshop: Web Mining for Usage Patterns & User Profiles*, pages 100-114, Edmonton, Canada, July 2002.
21. Walter Böhm, Andreas Geyer-Schulz, Michael Hahsler, and Maximillian Jahn. Repeat buying theory and its application for recommender services. In O. Opitz and M. Schwaiger, editors, *Exploratory Data Analysis in Empirical Research, Proceedings of the 25th Annual Conference of the Gesellschaft für Klassifikation e.V., University of Munich, March 14-16, 2001*, pages 229-239. Springer-Verlag, 2002.
22. Andreas Geyer-Schulz, Michael Hahsler, and Maximillian Jahn. Recommendations for virtual universities from observed user behavior. In W. Gaul and G. Ritter, editors, *Classification, Automation, and New Media, Proceedings of the 24th Annual Conference of the Gesellschaft für Klassifikation e.V., University of Passau, March 15-17, 2000*, pages 273-280. Springer-Verlag, 2002.
23. Andreas Geyer-Schulz, Michael Hahsler, and Maximillian Jahn. Wissenschaftliche Recommendersysteme in Virtuellen Universitäten. In H.-J. Appelrath, R. Beyer, U. Marquardt, H.C. Mayr, and C. Steinberger, editors, *Unternehmen Hochschule*, Wien, Österreich, September 2001. Symposium UH2001, GI Lecture Notes in Informatics (LNI).
24. Andreas Geyer-Schulz, Michael Hahsler, and Maximillian Jahn. A customer purchase incidence model applied to recommender systems. In *WEBKDD2001 Workshop: Mining Log Data Across All Customer TouchPoints*, pages 35-45, San Francisco, CA, August 2001.
25. Andreas Geyer-Schulz and Michael Hahsler. Automatic labelling of references for information systems. In Reinhold Decker and Wolfgang Gaul, editors, *Classification and Information Processing at the Turn of the Millennium, Proceedings of the 23rd Annual Conference of the Gesellschaft für Klassifikation e.V., University of Bielefeld, March 10-12, 1999*, Studies in Classification, Data Analysis, and Knowledge Organization, pages 451-459. Springer-Verlag, 2000.
26. Andreas Geyer-Schulz and Michael Hahsler. Lebenslanges virtuelles Lernen. In Franciszek Grucza, editor, *Europas Arbeitswelt von Morgen*, pages 51-54, Wien, 2000. Wiener Zentrum der Polnischen Akademie der Wissenschaften.
27. Michael Hahsler and Bernd Simon. User-centered navigation re-design for web-based information systems. In H. Michael Chung, editor, *Proceedings of the Sixth Americas Conference on Information Systems (AMCIS 2000)*, pages 192-198, Long Beach, CA, 2000. Association for Information Systems.
28. Andreas Geyer-Schulz, Michael Hahsler, and Georg Schneider. The virtual university as a network economy. In Heinrich C. Mayr, Claudia Steinberger, Hans-Jürgen Appelrath, and Uwe Marquardt, editors, *Informatik '99, Unternehmen Hochschule '99, Workshop-Unterlagen*, pages 75-86, Bielefeld, Germany, October 1999.

Presentations and Talks

1. Recommender systems: From content to latent factor analysis, CSE Colloquium, Department of Computer Science and Engineering, Southern Methodist University, Dallas, Texas, September 7, 2011.
2. Dissimilarity plots: A visual exploration tool for partitional clustering, June 2011. Invited talk, 42th Symposium on the Interface, Cary, NC, June 1-3, 2011.
3. Visualizing association rules in hierarchical groups, June 2011. 42th Symposium on the Interface, Cary, NC, June 1-3, 2011.
4. Analyzing incomplete biological pathways using network motifs, May 2011. Division of Biomedical Informatics Retreat, UT Southwestern Medical Center, Dallas, TX, May 6 and 12, 2011.
5. Temporal structure learning for clustering massive data streams in real-time, April 2011. SIAM Conference on Data Mining (SDM11), Phoenix, AZ, April 28-30, 2011.
6. Dissimilarity plots: A visual exploration tool for partitional clustering, CSE Colloquium, Department of Computer Science and Engineering, Southern Methodist University, Dallas, TX, April 3, 2009.
7. A probabilistic approach to association rule mining. CSE Colloquium, Department of Computer Science and Engineering, Southern Methodist University, Dallas, Texas, October 10, 2008.
8. Generating top-N recommendations from binary profile data. Berufungsvortrag Wirtschaftsinformatik, WU Wien, July 16, 2008.
9. Two applications of the TSP for data analysis. 31th Annual Conference of the German Classification Society (GfKl 2007), Freiburg, March 7-9, 2007.
10. Probabilistische Ansätze in der Assoziationsanalyse. Habilitationsvortrag, Wirtschaftsuniversität Wien, May 19, 2006.
11. An association rule mining infrastructure for the R data analysis toolbox, 30th Annual Conference of the German Classification Society (GfKl 2006), Berlin, March 8-10, 2006.
12. Warenkorbanalyse mit Hilfe der Statistiksoftware R. WU Competence Day, Wirtschaftsuniversität Wien, 19. October, 2006.
13. Optimizing web sites for customer retention, 2005 International Workshop on Customer Relationship Management: Data Mining Meets Marketing November 18th & 19th, 2005, New York City, USA.
14. Implications of probabilistic data modeling for rule mining. 29th Annual Conference of the German Classification Society (GfKl 2005), March 9-11, 2005, Magdeburg, Germany.
15. Discussion of a large-scale open source data collection methodology. 38th Hawaii International Conference on System Sciences (HICSS-38), January 3-6, 2005, Hilton Waikoloa Village, Big Island, Hawaii.
16. ePubWU - Erfahrungen mit einer Volltextplattform an der Wirtschaftsuniversität Wien, 28. Österreichischer Bibliothekartag 2004, Linz, Austria.

17. Gernerating synthetic transaction data for tuning usage mining algorithms, March 2003. 27th Annual GfKl-Conference, Cottbus, Germany.
18. Software reuse with analysis patterns. AMCIS 2002, August 9-11, 2002, Dallas, Texas.
19. Evaluation of recommender algorithms for an internet information broker based on simple association rules and on the repeat-buying theory, July 2002. WEBKDD 2002, Edmonton, Alberta, Canada.
20. Patterns im Softwareentwicklungsprozeß, September 2001. ADV Arbeitsgemeinschaft für Datenverarbeitung, Wien.
21. A customer purchase incidence model applied to recommender services. WEBKDD 2001, August 2001, San Francisco, CA.
22. User-centered navigation re-design for web-based information systems. AMCIS 2000, August 2000, Long Beach, CA.
23. Living Lectures - WU Virtual Library: Ein Lernportal, March 2000. in Vortragsreihe "Lernen per Internet", Technische Universität Wien.
24. Living Lectures - Virtual University Projekt: Informationstechnologie im universitären Bildungsbereich, June 1999. Global Village 99.
25. Automatic labelling of references for Internet information systems, March 1999. 23rd Annual GfKl-Conference, Bielefeld, Germany.

Last update: 02/01/12